SPECTRAL ELEMENT DISCRETIZATIONS OF THE POISSON EQUATION WITH MIXED BOUNDARY CONDITIONS

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Abstract

The aim of this paper is to investigate the rate of convergence of the spectral element discretization of the Poisson equation in a square when it is provided with boundary conditions of mixed Dirichlet and Neumann types. We consider the two situations where the parts of the boundary corresponding to Dirichlet and Neumann conditions intersect with angles equal to $\pi/2$ or π.